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ABSTRACT

The major features previously used to define rural life now fail to describe much of rural America, as changes that place rural areas in the vanguard of American society are manifest in rural landscape, institutions, economic activity, and life. The principal policy thrusts of modernization and urbanization and the related theories of product cycles and growth centers have been the backbone of a public policy designed to destroy ruralism and to overwhelm, reduce, and undermine rural values and institutions. Rural development activity is still plagued by communities that have failed to respond to national growth trends, people left behind by changing occupational patterns, overdevelopment, lack of cultural preservation, and urbanism. Rural America is, however, entering into an advanced social system, and new rural policy must now be formed on the basis of the major alterations occurring in five sociotechnical dimensions: the rural economy, occupational patterns, technical capacity, future orientation, and decision-making institutions. Key features of that policy include encouraging new links between education and economic development, establishing technology development centers on an experimental basis in some rural areas, developing new planning and development technologies and techniques, and using capacity sharing techniques. Such policy can help rural communities become the basis for a new civic pattern of low density smaller towns and cities linked by technology but maintaining separate identities. (SB)

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Post-Industrial Rurality

Rural America cannot be easily defined or understood any longer. In fact, the major features previously used to define rural--simple life, agricultural, small, homogeneous and dull--fail to describe much of Rural America today. The recent changes that have taken place in rural areas are so astounding that few scholars, policy makers or the public fully understand them. Most current research has focused almost entirely on the population changes in non-metropolitan areas. However, rural population change is the symptom of deeper underlying forces affecting the entire society. The manifestation of these forces is observed in a major transformation in (1) rural landscape, (2) rural institutions, (3) rural economic activity and (4) rural life. What I will argue is that rural America is no longer the residual of larger modern and urban forces in American society; but it is in the vanguard. Rural or non-metropolitan America is what the nation is evolving to rather than emerging from. In essence, I am suggesting that all of us concerned with rural areas must dramatically and permanently alter our thinking. We must forget our simplistic notions of rural as the vestige of the past

and start thinking of it as the crucible for the future. The reasons for this lie both in the failure of the urban culture as well as the persistent American pastoral compulsion. In addition to these social forces new technology is emerging both in rural areas and elsewhere to make it possible to reach a new and more desirable living pattern. That is, technological development of the last several decades has reduced place as a significant consideration in living standard or life opportunities. This tremendous alteration in socio-technical conditions has occurred quietly and unnoticed. Since most of us failed to observe the change, we emotionally deny that it has occurred and cling to more simple and primitive concepts of rurality.

The prevailing views on the role of technology in shaping rural areas remain conceptually based in urban bias. The current analysis follows these general lines.

1. The Interstate Highway System opened rural places to expanding urban settlement.
   - While there is some truth to this view, it fails to explain (a) growth well beyond urban areas and (b) growth in places distant for interstate highways.
2. The Movement of branch plants to rural areas in the 1950's and 1960's altered population patterns shifting people from urban to rural and assisting in the modernization of small towns.

- There is considerable merit in this argument but it does not account entirely for the growth of new firms in non-metropolitan areas.

3. Television and associated electronic devices created visual access to urban places without the trauma of urban life.

- Again, this view has some merit. However, there is considerable evidence that non-metropolitan residents are no less sophisticated than urbanites. Rural people either travel to or obtain live entertainment in their own communities.

These "Looking Backward" conceptualizations of the impact of technology on rural life are no longer appropriate. A new advanced rurality thesis is being formed. It is the thesis that I will address.

The Base for An Advanced Rural Society

Rural America is entering into an advanced social system. This advanced society is based on the five dimensions that Ted Bradshaw and I derived from Daniel Bell's depictions of post-industrialism in our book, Rural Communities in Advanced Industrial Society. These are:

1. Economic Sector: Alteration from natural resources and goods production to a service economy.

2. Occupational distribution: pre-eminence of professional and technical classes.

3. Axial principle: the central role of theoretical and technical knowledge as a source of innovation.

4. Future orientation: forecasting and controlling the outcomes of social and technical inputs.

5. Decision-making: the creation of a new intellectual technology

It is these technologies that undergird the new rural advanced industrialism. The former conceptualization that rural areas are lagging must be replaced with a new understanding which recognizes differential growth rates and potential among rural places. In order to comprehend the intellectual tension between the advanced industrial view and earlier views, we must review the sources of our current concepts.

Overcoming a Rural Past to Shape a Nation's Future

A rural past is difficult to overcome. Rural has so long been associated with backwordness, ineptitude, lack of capacity (physical and intellectual) and simplicity and virtually all public policy is based on this conceptualization. Rural development policy consequently has focused on improving the areas economic and institutional capacity of rural areas. The current emphasis on economic

development in rural areas is based entirely on this premise. The bulk of public policy remains therefore not to build on the strengths of rural areas but to irradicate the concept of rurality. Two principal public policy thrusts - modernization and urbanization - have been backbone of public policy designed to destroy ruralism.

Modernization

By far the major focus of rural modernization has involved influencing infrastructure investment to improve the business potentials of rural places. The major approaches to location theory have suggested that businesses will locate where they have the greatest competitive advantage. Depressed areas are those that have surpluses of low wage labor but are short on the capital to utilize the labor. If firms are free to pursue their best interests, it is assumed that they may locate where the labor costs are lowest, thus bringing capital into depressed rural areas until wages rise and savings are no longer significant. Similarly, it is assumed that unemployed rural persons from depressed regions will migrate to places where jobs are plentiful. In these ways equilibrium will be reached. More recent developments in location theory have linked labor costs, transportation time, proximity to markets, and economies of aggregation and scale, with fundamental business costs to better understand plant location behavior. Thus, the development of adequate roads, sewers, utility service, and other infrastructure has been aimed at making rural areas competitive with urban center so they can attract businesses.

A related set of theories about the character of economic expansion involves the identification of key industries which provide the levers for other spin-off development. For example, export base theories give a special role to industries which draw dollars from the outside either through selling locally produced products to other communities, states, or nations. Such "basic" industries have large economic multipliers to stimulate local business opportunities. A corollary concept proposes import substitution which suggests that if goods and services purchased outside the local areas can be produced locally the net savings of dollars will help build the local economy. The understanding of these dynamics is rooted principally in input-output to demonstrate production functions by various industries and their interrelated supply consumption components. Consumer expenditures of wage earners in a place also leads to increased earnings and sales thus retaining and generating greater external wealth. These basic concepts provide economic developers a framework with which to identify industrial development options and opportunities for local area economies.

Industrial and business development in rural areas also has relied on the "product cycle" concept which positting a linear cycle for industrial production which originates in urban centers during early stages when their technology is new and developing. As production becomes more standardized, firms move away from the high priced urban center to rural areas for low wages, thus freeing urban areas for the next wave of development. According to the theory, attract-

ing these firms to rural areas produces few quality jobs and subjects rural areas to footloose industries which sooner or later move away from the rural area or out of the country.

Based on these conceptual frameworks rural economic development policy has attempted to modernize rural places through the attraction of businesses from outside the local rural environment. In doing so, developers initiated infrasturcture projects, constructed industrial parks, prepared promotional brochures, and sponsored special events. States have employed industrial developers, provided special tax incentives, and developed targeted programs for manufacturing or high tech industry. Many organizations have been created for these purposes such as Chambers of Commerce, economic development committees, and local finance organizations.

The available evidence, however, indicates that attraction efforts provide little real net benefit for rural communities.

Urbanization

The other broad emphasis to economic development has been on increasing the proportion of the population enjoying urban amenities either through the elimination of policy concern with the most rural places and moving population to urban areas or the development of urban amenities in rural places. By these devices it is assumed that urban economic growth can be exported to rural places if a suitable population mass can be produced or induced.

The major proposal based on shifting population to match development is the growth center concept by Brian Berry. He examined the location of all U.S. residents and showed that 95 percent were within commuting distance of a major metropolitan area and that major metropolitan areas had significant impacts on the communities in their region of influence. Those cities with over 250,000 population were found to be especially effective and self-contained in their growth, whereas smaller cities needed support. Cities under 50,000 population were found by Berry to largely lack viability in an urban economy. Berry argues that development efforts in these places are wasted. Similarly, Hansen advocated identifying growth centers for public investment:

> "In brief, a growth center must not only be rapidly growing, but also a center which could be expected to benefit a significant number of people from lagging areas. Thus, growth centers would have to be selected on the basis of commuting and migration data, as well as on employment growth."

These analyses suggested that the medium sized places should be used to "collect" population from outlying rural areas and to concentrate growth in a relatively few places and build them to cities of 250,000. This theory relied on few rural development notions except for efforts to sustain agriculture and provide training in rural areas for migrants to urban places.

An associated development construct has been to help rural communities develop capacity to compete in an urban dominated society. This perspective suggests that the key to an effective rural development rests in the hands of local residents who themselves become

involved in community based organizations. These organizations are believed to respond to individual community needs, especially those of the local disadvantaged one organized with government encouragement to mobilize local resources both human and natural to produce a legitimate indigenous economy. Its focus is not on the need of business or the investment which is being made in human resources, but on the capacity of local community groups to create the potential for local economic activity.

Both modernization and urbanization have had multiple impacts on rural places. It is not clear how many of the impacts associated with these policies were positive. However, it is clear that their basic orientation was and is to overwhelm, reduce and undermine rural values and institutions. This unfortunate aspect of national policy has not been well understood or clearly reported. In fact, those who proposed alternative approaches were branded as conservatives or preservationists. Now it is clear that a new condition exists which calls for new policy approaches, and that recognize the value and values of rural places and rural people.

The New Rural Policy Dimensions

New rural policy must be formed on the sociotechnical concepts discussed as the base for a rural advanced industrial society.

1. New Economic Sector Technologies

Rural America can no longer be associated with a single economic activity. The rural economy which was dominated by agriculture, timber, and mining is now diverse in every respect. These old economic institutions, however, maintain an important position in the rural economy. However, they no longer absorb labor. They use more scientific and capital inputs than human resources. Further, increasingly the human resources they use are highly technical and white collar professional rather than blue collar. The real growth in the rural economy as the figure indicates is in the service sector. Over 60% of all rural employees are now in occupations, similar to their urban counterparts. In fact, rural employment patterns clearly demonstrate that rural areas are shedding the low skill, low wage urban discard industries and branch plants for new growth industries.

The principal component of the new industrial form in rural areas is knowledge. In essence, quality human resources are becoming an increasingly dominant feature in rural growth communities. The link between education resources, particularly the contribution of 2 and 4 year colleges, to rural economic development is very clear. However, it is difficult to disassociate this development from an equally strong pull component - good people. Industry is increasingly searching out a quality labor force to determine location. As a result small communi-

ties in Maine, Vermont, California, Colorado, New Mexico, Texas and North Carolina as well as others are the new home for advanced technology firms. Even those firms that employ new technologies rather than developing them are finding rural areas, Tennessee, Arkansas, Kentucky and many other states as likely locations for new plants. This includes the Japanese, Germans and even the British.

2. New Occupational Pattern as Technological Base

The rapid population growth in rural America has been associated with an even more astounding alteration in the distribution of occupations. Rural areas professional, managerial and executive labor force increased by over 10% in the last decade while skilled labor and service workers made even larger gains. The low job creation performance of agriculture and other natural resource areas continued. However, even in the agricultural and other natural resource sectors, real changes are masked. In many agricultural areas production and distribution facilities have added more skilled jobs closer to the fields in adjacent small towns. Further the agricultural and timber industries with other real estate, international trade, insurance and consumer products dimensions create numerous new forms of employment. This employment which is not reported in the agriculture or natural resource sector is clearly related to it.

The striking thing about this new employment pattern is not the category of job but the actual work activities. Increasingly this is work performed with the head and not the hands. That is, this work is based on intellectual inputs with few if any manual characteristics. As a result, the quality of the labor force is the central ingredient in the attractiveness of rural settings. Recent research is confirming the fact that the rural labor force is intellectually competitive with the urban labor force. There are several reasons for this.

The improvements in rural schools initiated in the 1950's are showing results today. Associated with the general improvements in schooling, there has been a corresponding increase in post secondary educational facilities in rural areas. The increase in vocational technical schools, community colleges and four year colleges have transformed the intellectual landscape of rural communities. These institutions make it easier for higher technology firms to select rural locations. These firms are now able to offer their workforce continuing education as well as basic education for their families.

Second, rural places are considered desirable locations by young professionals. These professionals and their families are increasing the total human resource base of the community.

Their active involvement in schools, local government and the like is improving the capacity and responsiveness of local institutions.

As a result of these factors and forces rural places are becoming the venue for both a new industrial and occupational configuration. The people are pulling the industry into small towns rather than industry pushing the people into urban areas.

3. The Central Role of Technology in Rural Areas and Small Towns

Both hard and soft technologies are increasingly important in rural areas. The hard technology is associated with telecommunications, airports, all weather roads and highways as well as energy technologies. Rural areas have certainly benefited from the profusion of the hard technologies. In fact, it might be pointed out that the greatest technological improvements in the country have taken place in farming and natural resource industries. Most of the nation's increased productivity can be associated with agricultural improvements. Nonetheless, it is easily forgotten that other technologies and techniques ranging from rural electrification to computers are influencing rural life.

These technologies are incorporated in numerous rural institutions which we take for granted. Rural hospitals, schools and non-profit and government institutions form a new network of

technology developing and disseminating groups that underpin rural society. Few individuals in rural areas are now isolated from the most advanced technological devices useful in growing their crops or caring for their illness. Small and medium size towns such as Rochester, Minnesota are the home of medical technology. Leading computer devices are developed in small communities in Northern California, Vermont and North Carolina. Machine technology is emerging in small towns in Wisconsin. The insurance and banking industries have found small communities throughout the Mid-West and South to be the best location for their enterprises.

Recent research by Miller indicates that the old view of rural areas as the recipients of dying manufacturing industries from the Northwest is inaccurate. In the 1970's 19% of the new firms added to rural areas were in instruments, printing and publishing, chemical and plastic products. A respectable number of these firms had only non-metropolitan production facilities. While rural areas continue to receive a disproportionate share of branch plants, that is not the full story.

Finally, rural communities offer the best site for new small firms. Over 14% of new rural in migrants started new small businesses. The survival rates of these businesses can only be

judged later, but it appears many of these firms offer new products and services and with proper management they should survive.

4. Futures Technologies in Rural America

The thesis of this talk is that small towns are the future and not the past. The settlement of small towns is the favored over all others by business and individuals. The megalopolis of the 1960's with great mega city centers stretch from Chicago to Cleveland; from Boston to Washington, D.C., and from Santa Barbara to the Mexican border, seem to be foolhardy now. To some extent the represent urban reality. But it is this reality that is being popularly rejected. People want to control their destiny by knowing their neighbors; housing building on a human scale; and, to be in touch with nature. The mega city does not offer this.

As a result of this new "smaller is beautiful" conceptualization of the future, new community futures are being envisioned. Small cities and rural areas are this future. But, this vision is both fragile and difficult to achieve because while growth itself can destroy this vision, some growth must be accepted to attain it. In essence, the small town rural life can only be achieved with new planning techniques that control future growth. The concept of planning to many small town and rural

area people is antithetical to their desired life style. Nonetheless, if planning fails so does the beauty or essence of smallness. The choice is difficult.

In addition, institutional futures are being shaped in rural areas. New roles for educational institutions, hospital, churches and government are being forged in the rural environment. Communities that are growing are faced with the need to rethink the role of existing institutions to cope with growth. For example, schools and hospital staff are assisting local city staff in mapping out growth planning and economic development scenarios. In some instances local churches are becoming involved in social services assessments and delivery of service to new migrants who desire a different array of social, recreational and welfare services than the community provides.

Those rural areas that are lagging or undergoing job losses are attempting to develop new futures for themselves. Recognizing that some rural areas have new opportunities does not deny the large number of places that continue to decline. The future for these communities is uncertain. It is important that any attempt to revitalize such communities procede from a human as well as a physical technology base.

5. Decision-making Technologies in Rural America

Small towns and rural areas of necessity are forging new decision making institutional arrangements. These new institutions emerge in part from both complexities of the present national environment as well as the past problems of small towns. With respect to the past, rural areas have been the site for radioactive waste, chemical storage and the like. In addition, current chemical fertilizers, herbicides and pesticides form new health hazards. It is only through concerted action of several jurisdictions that such issues can be addressed. Many jurisdictions have formed together in efforts to deal effectively with these environmental problems. While the physical environment is important, the need for jobs, social and physical infrastructure remains more important in most rural areas.

Consequently, new sets of voluntary associations are being formed among non-metropolitan communities to deal with solid waste, provide inter and intra city transportation and fire protection, handle jobs training and similar projects. While these efforts remain small and fragile small community leaders are recognizing the need to share capacity in order to maximize their potential. It is this arena of cooperative institutional development in numerous fields that a new "institutional techology" forms. This institutional technology goes well beyond local government relations. New non-profit development institutions operating on a county or multicounty base are assembling

talent and resources to deal with community level economic development. Wisconsin's impact seven organization is an illustration of this form of new multibased rural development institution. In several states we have found similar institutions. For example, we discovered interesting rural development institutions sponsored by local government in Kentucky, rural women's organizations in North Carolina and community based development organizations in Mississippi.

These organizations are forming a new highly skilled and technically proficient structure for rural development. Communities with these structures have been consistently better equipped to deal with both good and bad economic situations.

Summary

The advanced rural society is based on five dimensions that alter the rural economy, occupational patterns, techical capacity, future orientation and decision-making institutions. While I am not arguing that all rural places or small towns possess all of these attributes, I do suggest that they form a new base for rural areas. Those areas with most or all of these dimensions form the leading edge in the advanced rural society. It is this leading edge that we need to understand to develop and control rural futures--not the past. The communities of past rurality, which were and are natural resources based and traditional, will not predict or guide the

future. Therefore, development theorists need to examine the characteristics that will help small towns and rural areas take their place in the future.

The Challenges for an Advanced Rural Society

The rural communities on the leading edge do not form a base for many other areas. Rural development in the present remains as unbalanced as in the past. Several old factors continue to plague new rural development activity as much as former problems limited past efforts.

These are:

. Communities Left-Behind

There remain over 500 rural counties that have failed to respond to the national growth trends. While many of these counties are in the South, there are many in the Mid-West and West. These communities remain lagging areas because (1) they offer little in visual beauty or access to other areas, (2) their economy is unidimensional, usually agriculture, timber, or mining, (3) they do not have post secondary educational institutions or (4) they lack community leadership or an institutional framework for economic development.

. People Left Behind

While occupational patterns have changed substantially in rural areas, the results for local long term residents have not been impressive. Women and minorities continue to remain underrepresented in the best new jobs. Nearly 41 percent of Blacks in non-

metro areas had incomes below the poverty level. Native Americans had even higher levels of poverty and unemployment rates for adults ranging from 50% to 70%.

Not only are these individuals left behind in the economic upturn they are increasingly displaced by in migration. Rising rents as well as traditional discrimination have pushed minorities out of many smaller communities. New rural countryside ghettoes are being formed on the outside of some small towns; or alternately larger county seats in growing counties are receiving an influx of displaced small town minorities.

. Over Development

Some rural counties have moved rapidly into new manufacturing arenas displacing agriculture and similar areas. As a result, these communities have replaced one form of mono culture with another. Some rural counties have become branch plant centers. With manufacturing declines these counties have suffered dramatic unemployment levels. This lack of economic balance has had severe consequences on rural areas that have failed to understand the need for internal economic balance.

. Cultural Preservation

Small towns and rural places must maintain their essential characteristics. There are few communities that understand how to preserve their past as they absorb new activities. As a result a substantial amount of tacky physical development has overwhelmed locally valuable sites. Better planning could prevent these

situations, if community residents will undertake studies to determine both items of cultural values as well as mechanisms to preserve them.

. Urbanism

Rural communities in their march toward modern facilities and industries assume they must adopt urban systems. Many rural communities employ urban trained planners who know only urban standards to plan development. The reason for this is that rural planning and development is not a separate discipline from its urban form. Thus, few professionals are prepared at major universities to work effectively in small town government as planners or other public administrators. It is important that small communities begin to articulate their need for new professionals prepared to work in small cities and rural areas.

Directions for Rural Development in an Advanced Industrial Society

The small community is the community of the future. Technological development irrespective of whether it is physical or social will be the essential ingredient in how rural communities and small towns play their future roles. To the extent that rural areas react to the changes in the macro-society, they surrender their ability to influence societal direction. But it is possible at this juncture in history for policy makers in the national, state and local level to genuinely alter the course of the society. Small cities as the lead in this transformation have a new set of responsibilities. These responsibilities include developing a social environment that

assist the nation deal more effectively with its basic problems of joblessness, undereducation and poor use of physical and human resources. Public policy that can assist small communities play their role must come fundamentally from the small towns and rural areas of the nation. These policies must reflect an opportunity to design a different pattern of living for people who seek it and a new set of institutions to act as the foundation for a more balanced development pattern. The key features of these new policies include:

1. Encouraging new links between education and economic development

   Since human resources are the critical ingredient in non-metropolitan growth, then policies that create better links between education and economic development should be supported. Such policies would include a series of federal government programs that incorporated all local development programs and manpower activities into a single rural approach. That is the current UDAG, CDBG and JTPA programs along with SBA financing activities should be merged into a single rural development action grant programs.

2. Technology development centers should be established an experimental basis in some rural areas

   The role of technology to economic development has been discussed. It is clear that rural communities with access to technology are doing better than those without such access. Therefore, it is important to develop in a number of lower technology communities, new capacity. This new capacity would be in the

form of technological development centers. The purpose of these centers would be to assist in perfecting local products and service as well as in facilitating new scientific development suitable to rural environments. This experiment would be aimed at seeing whether technological capacity will influence community growth.

While it may be suggested that this concept will be costly, it would not be as costly as the urban enterprise zone proposals currently being considered.

3. New planning and development technologies and techniques

The competition for land uses is just now arising significantly. The current strategies for dealing with such conflicts is to isolate and separate functions (i.e., manufacturing vs. farming). These artificial and usually tension filled designations are not the only mode. Recent analysis of new permitting processes in Vermont and Oregon suggest new possibilities. Current land use planning for rural areas is not very sophisticated or useful. Therefore, new creative research and professional planning tools need to be devised that guide development without destroying the rural social and physical environment.

4. Capacity Sharing Techniques

While many rural areas have learned to work cooperatively with neighbors, others have not. In fact, the rivalries occassioned by the existing sales tax and similar local revenue issues militate against cooperation. Nonetheless, cooperation is critical to small cities (a) maintaining their small size and (b) developing the required resources to meet community need.

The federal and state governments should encourage all forms of capacity sharing through reinstituting a capacity grants program. These grants could be modeled on the old "701" planning grants. They would be designed to encourage resources sharing rather than planning activities. Capacity sharing could include such things as a group of cities sharing computer capacity. Alternately communities might be interlinked through computers to maintain information files on federal and state grants, census and planning data, tax and expenditure information, etc. The system might work like this. One community would handle all data on federal programs and applications for the others. Another community in the some group would maintain tax and expenditure data for the same group, etc.

In essence, rather than promoting new regional institutions local jurisdictions could share their capacities with one another.

Conclusion

Rural communities and small towns are part of the future not museums of the past. While the legitimate earlier features of rural and urban areas must be preserved, it is important that these communities become the basis for a new civic pattern, pattern of low density smaller cities and towns linked together by technology but maintaining their distinct identities. These livable places form a picaplexus or small complex of towns that bring people back to a face to face living scale. In this new arrangement of living systems America can find its way out of the current overwhelming urbanism that distorts human values and reduces social organization to a series of security systems.

In essence, I believe technology can help us become a nation of people. It can help us form the small city environment the American people desire without the impediments of the past. Technology can serve rural and small towns all over the world by allowing people to live decently in the place of their choice.